BRUHATH BANGALORE MAHANAGARA PALIKE

COVER PAGE FOR

QUALITY CONTROL REPORT

Name of Work

Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division.(PACKAGE NO-07).

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON CEMENT

RNC No. : RNC-BBMP-371-2021-22
Date. : 01.03.2022

Client Name : **Executive Engineer,** Yelahanka Division, BBMP, Bangalore.
Contractor Name : **Sri. Mohan Kumar S.R,** Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS-4031 (Part -1, 3, 4, 5 & 6) 1988 (RA-2014)
Material description : Birla Super OPC 53 grade Cement
Date of Reciept of Sample : 01.03.2022
Date of testing : 01.03.2022

TEST RESULTS

Sl.No	Physical Parameters	Test Results	Requirements as per IS: 269-2015
1	Consistancy	30.00%	-
2	Initial Setting Time	150 minutes	Not Less than 30 Minutes
3	Final Setting Time	305 minutes	Not More than 600 Minutes
4	Soundness by Le - Chatelier's Method	1 mm	Not more than 10mm
5	Fineness by Dry Sieving Method	5.32%	Not more than 10%

Remarks : The above tested Sample Confirms as per IS Specifications.

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PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON COARSE AGGREGATES

RNC No. : RNC-BBMP-371-2021-22
Date. : 01.03.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
Contractor Name : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2386 (Part-1)- 1963 RA 2016
Material description : 20mm Coarse Aggregates
Date of Reciept of Sample : 01.03.2022
Date of testing : 01.03.2022

TEST RESULTS

Total Wt. of Aggregates in gms 5000

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Requirements as per IS 383:2016
40	0	0	0	100	100
20	227	227	4.54	95.46	95-100
10	2763	2990	59.80	40.20	25-55
4.75	1650	4640	92.80	7.20	0-10

Remarks : The above tested Sample Confirms as per IS Specifications.

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TEST REPORT ON COARSE AGGREGATES

RNC No. : RNC-BBMP-371-2021-22
Date. : 01.03.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
Contractor Name : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07)
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2386 (Part-1)- 1963 RA 2016
Material description : 40mm Coarse Aggregates
Date of Reciept of Sample : 01.03.2022
Date of testing : 01.03.2022

TEST RESULTS

Total Wt. of Aggregates in gms 15000

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Requirements as per IS 383:2016
80	0	0	0	100	100
40	520	520	3.47	96.53	95-100
20	8368	8888	59.25	40.75	30-70
10	3455	12343	82.29	17.71	10-35
4.75	2288	14631	97.54	2.46	0-5

Remarks : The above tested Sample Confirms as per IS Specifications.

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RNC CONSULTANT

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TEST REPORT ON PRECAST SLAB

RNC No. : RNC-BBMP-371-2021-22
Date. : 19.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division.
Source of Sample : Sample Supplied by Contractor.
Technical Referenc : IS 516 - 1959 RA 2018
Material descriptio : Precast Slab 100mm thick
Date of Reciept of Sample : 19.04.2022
Date of testing : 19.04.2022

TEST RESULTS

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	86.00	0.445	2635.31	1.72	0.960	26.74	13.62	14.03	13.47	16.83
2	50.00	83.50	0.419	2555.63	1.67	0.960	27.50	14.01	14.43	13.85	17.31
3	50.00	84.50	0.434	2615.79	1.69	0.960	28.96	14.75	15.19	14.58	18.23

* Data specified by Contractor.

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TEST REPORT ON PRECAST SLAB

RNC No. : RNC-BBMP-371-2021-22
Date. : 19.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division.
Source of Sample : Sample Supplied by Contractor.
Technical Referenc : IS 516 - 1959 RA 2018
Material descriptio : Precast Slab 230mm thick
Date of Reciept of Sample : 19.04.2022
Date of testing : 19.04.2022

TEST RESULTS

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	100.00	120.50	2.432	2569.72	1.21	0.960	148.32	18.88	19.45	18.67	23.34
2	100.00	119.50	2.451	2611.47	1.20	0.960	138.45	17.63	18.16	17.43	21.79
3	100.00	122.00	2.460	2567.35	1.22	0.960	128.95	16.42	16.91	16.23	20.29

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 05.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	08.03.2022	05.04.2022	8.152	515.6	22.92
2	08.03.2022	05.04.2022	8.166	520.7	23.14
3	08.03.2022	05.04.2022	8.174	504.2	22.41

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 06.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	09.03.2022	06.04.2022	8.160	498.5	22.16
2	09.03.2022	06.04.2022	8.188	512.3	22.77
3	09.03.2022	06.04.2022	8.179	526.3	23.39

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 06.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	09.03.2022	06.04.2022	8.154	526.5	23.40
2	09.03.2022	06.04.2022	8.160	492.5	21.89
3	09.03.2022	06.04.2022	8.175	519.8	23.10

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 06.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	09.03.2022	06.04.2022	8.182	456.2	20.28
2	09.03.2022	06.04.2022	8.176	523.6	23.27
3	09.03.2022	06.04.2022	8.156	508.4	22.60

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 07.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.03.2022	07.04.2022	8.192	503.2	22.36
2	10.03.2022	07.04.2022	8.183	487.3	21.66
3	10.03.2022	07.04.2022	8.176	473.6	21.05

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
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Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.03.2022	07.04.2022	8.163	486.2	21.61
2	10.03.2022	07.04.2022	8.185	464.8	20.66
3	10.03.2022	07.04.2022	8.192	506.6	22.52

* Data specified by Contractor.

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RNC No. : RNC-BBMP-371-2021-22
Date. : 07.04.2022

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Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.03.2022	07.04.2022	8.150	510.6	22.69
2	10.03.2022	07.04.2022	8.158	527.8	23.46
3	10.03.2022	07.04.2022	8.176	488.5	21.71

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 08.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	11.03.2022	08.04.2022	8.152	464.1	20.63
2	11.03.2022	08.04.2022	8.168	487.2	21.65
3	11.03.2022	08.04.2022	8.174	474.5	21.09

* Data specified by Contractor.

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RNC No. : RNC-BBMP-371-2021-22
Date. : 08.04.2022

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Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	11.03.2022	08.04.2022	8.171	521.4	23.17
2	11.03.2022	08.04.2022	8.163	512.7	22.79
3	11.03.2022	08.04.2022	8.150	489.2	21.74

* Data specified by Contractor.

Notes:-

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 09.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.03.2022	09.04.2022	8.154	485.1	21.56
2	12.03.2022	09.04.2022	8.167	507.8	22.57
3	12.03.2022	09.04.2022	8.173	538.8	23.95

* Data specified by Contractor.

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PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 09.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.03.2022	09.04.2022	8.161	513.4	22.82
2	12.03.2022	09.04.2022	8.186	503.8	22.39
3	12.03.2022	09.04.2022	8.168	481.4	21.40

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 09.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.03.2022	09.04.2022	8.159	503.4	22.37
2	12.03.2022	09.04.2022	9.160	473.2	21.03
3	12.03.2022	09.04.2022	9.181	496.3	22.06

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 09.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.03.2022	09.04.2022	8.152	515.4	22.91
2	12.03.2022	09.04.2022	8.165	521.3	23.17
3	12.03.2022	09.04.2022	8.173	504.2	22.41

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 11.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.03.2022	11.04.2022	8.186	486.1	21.60
2	14.03.2022	11.04.2022	8.195	493.8	21.95
3	14.03.2022	11.04.2022	8.153	507.8	22.57

* Data specified by Contractor.

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TEST REPORT ON CONCRETE CUBES

RNC No. : RNC-BBMP-371-2021-22
Date. : 11.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 516 - 1959 RA 2018
Material description : Cement Concrete
Age of Concrete : 28 days
Grade of Concrete : M_{20}

TEST RESULTS

Sl.No / Identification	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.03.2022	11.04.2022	8.152	495.3	22.01
2	14.03.2022	11.04.2022	8.169	493.2	21.92
3	14.03.2022	11.04.2022	8.173	502.3	22.32

* Data specified by Contractor.

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RNC CONSULTANT
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TEST REPORT ON GRADATION OF GRANULAR SUB BASE
(Grading V)

RNC No. : RNC-BBMP-371-2021-22
Date. : 11.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample :Sample Supplied by Contractor.
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015, MORTH Table 400-1
Material description : Granular Sub Base
Date of Reciept of Sample : 11.04.2022
Date of testing : 11.04.2022

TEST RESULTS

Total Wt. of Aggregates in gms 19832

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 400-1
75	-	0	0	100	100
53	526	526	2.65	97.35	80-100
26.5	2147	2673	13.48	86.52	55-90
9.5	4872	7545	38.04	61.96	35-65
4.75	3324	10869	54.81	45.19	25-50
2.36	5984	16853	84.98	15.02	10-20
0.85	7454	18323	92.39	7.61	2-10
0.425	2631	19484	98.25	1.75	0-5

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TEST REPORT ON GRADATION OF GRANULAR SUB BASE
(Grading V)

RNC No. : RNC-BBMP-371-2021-22
Date. : 12.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample :Sample Supplied by Contractor.
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015, MORTH Table 400-1
Material description : Granular Sub Base
Date of Reciept of Sample : 12.04.2022
Date of testing : 12.04.2022

TEST RESULTS

Total Wt. of Aggregates in gms 19832

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 400-1
75	-	0	0	100	100
53	521	521	2.63	97.37	80-100
26.5	2145	2666	13.44	86.56	55-90
9.5	4873	7539	38.01	61.99	35-65
4.75	3326	10865	54.79	45.21	25-50
2.36	5981	16846	84.94	15.06	10-20
0.85	7456	18321	92.38	7.62	2-10
0.425	2632	19478	98.22	1.78	0-5

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Atterberg Limits (As per Table : 400-2)

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	23.50	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

* Data specified by Contractor

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-1 & 2, Grading V

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Atterberg Limits (As per Table : 400-2)

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	23.60	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

* Data specified by Contractor

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-1 & 2, Grading V

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TEST REPORT ON GRADATION OF GRANULAR SUB BASE
(Grading V)

RNC No. : RNC-BBMP-371-2021-22
Date. : 12.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample :Sample Supplied by Contractor.
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015, MORTH Table 400-1
Material description : Granular Sub Base
Date of Reciept of Sample : 12.04.2022
Date of testing : 12.04.2022

TEST RESULTS

Total Wt. of Aggregates in gms 19832

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 400-1
75	-	0	0	100	100
53	528	528	2.66	97.34	80-100
26.5	2141	2669	13.46	86.54	55-90
9.5	4870	7539	38.01	61.99	35-65
4.75	3328	10867	54.80	45.20	25-50
2.36	5986	16853	84.98	15.02	10-20
0.85	7451	18318	92.37	7.63	2-10
0.425	2635	19488	98.27	1.73	0-5

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON ATTERBERG LIMITS OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 18.04.2022

Client Name : **Executive Engineer,** Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R,** Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS:2720 (part 5)-1985 RA 2015, MORTH Table 400-13
Material description : Wet Mix Macadam
Date of Reciept of Sample : 18.04.2022
Date of testing : 18.04.2022

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-13
1	Liquid Limit	23.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

* Data specified by Contractor

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-13

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TEST REPORT ON ATTERBERG LIMITS OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 19.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS:2720 (part 5)-1985 RA 2015, MORTH Table 400-13
Material description : Wet Mix Macadam
Date of Reciept of Sample : 19.04.2022
Date of testing : 19.04.2022

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-13
1	Liquid Limit	22.70	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

* Data specified by Contractor

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-13

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TEST REPORT ON ATTERBERG LIMITS OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 21.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS.2720 (part 5)-1985 RA 2015, MORTH Table 400-13
Material description : Wet Mix Macadam
Date of Reciept of Sample : 21.04.2022
Date of testing : 21.04.2022

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-13
1	Liquid Limit	23.90	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

* Data specified by Contractor

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-13

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON GRADATION OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 19.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout. Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no -03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Referenc : IS 2720 (Part-4)- 1985 RA 2015, MORTH Table 400-13
Material description : Wet Mix Macadam
Date of Reciept of Sample : 19.04.2022
Date of testing : 19.04.2022

TEST RESULTS

Total Wt. of Aggregates in gms 17125

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 400-13
53	0	0	0	100	100
45	513	513	3.00	97.00	95-100
22.4	3534	4047	23.63	76.37	60-80
11.2	3153	7200	42.04	57.96	40-60
4.75	3615	10815	63.15	36.85	25-40
2.36	2856	13671	79.83	20.17	15-30
0.6	1533	15204	88.78	11.22	8-22
0.075	1640	16844	98.36	1.64	0-5

* Data specified by Contractor.

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-13

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON GRADATION OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 20.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015, MORTH Table 400-13
Material description : Wet Mix Macadam
Date of Reciept of Sample : 20.04.2022
Date of testing : 20.04.2022

TEST RESULTS

Total Wt. of Aggregates in gms 17125

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 400-13
53	0	0	0	100	100
45	510	510	2.98	97.02	95-100
22.4	3530	4040	23.59	76.41	60-80
11.2	3156	7196	42.02	57.98	40-60
4.75	3612	10808	63.11	36.89	25-40
2.36	2854	13662	79.78	20.22	15-30
0.6	1534	15196	88.74	11.26	8-22
0.075	1642	16838	98.32	1.68	0-5

* Data specified by Contractor.

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-13

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PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON GRADATION OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 20.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07)
Source of Sample : Sample Supplied by Contractor
Technical Referenc : IS 2720 (Part-4)- 1985 RA 2015, MORTH Table 400-13
Material description : Wet Mix Macadam
Date of Reciept of Sample : 20.04.2022
Date of testing : 20.04.2022

TEST RESULTS

Total Wt. of Aggregates in gms 17125

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 400-13
53	0	0	0	100	100
45	518	518	3.02	96.98	95-100
22.4	3536	4054	23.67	76.33	60-80
11.2	3154	7208	42.09	57.91	40-60
4.75	3617	10825	63.21	36.79	25-40
2.36	2857	13682	79.89	20.11	15-30
0.6	1534	15216	88.85	11.15	8-22
0.075	1646	16862	98.46	1.54	0-5

* Data specified by Contractor

Remarks: The above tested sample satisfies MORTH Specifications as per Table 400-13

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON AGGREGATE IMPACT VALUE OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 18.04.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015, MORTH Table 400-13
Material description : Wet Mix Macadam
Date of Reciept of Sample : 18.04.2022
Date of testing : 18.04.2022

TEST RESULTS

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	378	375	376	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	79	80	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	296	296	296	
4	Aggregate Impact value = percent fines	21.69	21.07	21.28	
	100* (W_2/W_1)%				**21.35**

* Data specified by Client.

Remarks: Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON FLAKINESS & ELONGATION OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 18.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no -03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2386(part 1)-1963 RA 2016, MORTH Table 400-12
Material description : Wet Mix Macadam
Date of Reciept of Sample : 18.04.2022
Date of testing : 18.04.2022

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-12
1	Flakiness Index	16.42%	Maximum allowable Flakiness & Elongation Index for Wet Mix macadam is 35%
2	Elongation Index	12.31%	
	Combined Flakiness & Elongation	**28.73%**	

* Data specified by Client.

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TEST REPORT ON FLAKINESS & ELONGATION OF WET MIX MACADAM

RNC No. : RNC-BBMP-371-2021-22
Date. : 19.04.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS:2386(part I)-1963 RA 2016, MORTH Table 400-12
Material description : Wet Mix Macadam
Date of Reciept of Sample : 19.04.2022
Date of testing : 19.04.2022

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-12
1	Flakiness Index	16.34%	Maximum allowable Flakiness & Elongation Index for Wet Mix macadam is 35%
2	Elongation Index	12.47%	
	Combined Flakiness & Elongation	**28.81%**	

* Data specified by Client.

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON AGGREGATE IMPACT VALUE

RNC No. : RNC-BBMP-371-2021-22
Date. : 02.06.2022

Client Name : **Executive Engineer,** Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R,** Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2386 (Part-4)- 1963 RA 2016, MORTH Table 500-17
Material description : Bituminous Concrete
Date of Reciept of Sample : 02.06.2022
Date of testing : 02.06.2022

TEST RESULTS

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	386	387	385	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	86	85	87	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	302	298	
4	Aggregate Impact value = percent fines	22.28	21.96	22.60	
	100* (W_2/W_1)%				**22.28**

* Data specified by Contractor.

Remarks: Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

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TEST REPORT ON BITUMEN

RNC No. : RNC-BBMP-371-2021-22
Date. : 02.06.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 73 -2013
Material description : VG 30 Bitumen
Date of Reciept of Sample : 02.06.2022
Date of testing : 02.06.2022

TEST RESULTS

The results of the tests conducted on the bitumen sample using for Bituminous Concrete

Sl.No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	47	Min 45
2	Softening point, ^{0}C	50	Min. 47
3	Ductility at 27^{0}C, cm	> 100	Min. 40
4	Flash Point, ^{0}C	320	Min. 220

* Data specified by Contractor.

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RNC CONSULTANT

PROJECT MANAGEMENT & CONSULTANCY SERVICES

TEST REPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION

RNC No. : RNC-BBMP-371-2021-22
Date. : 02.06.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).

Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2386 (Part-4)- 1963 RA 2016, MORTH Table 500-17
Material description : Bituminous Concrete
Date of Reciept of : 02.06.2022
Date of testing : 02.06.2022

TEST RESULTS

Total Wt. of Sample = 2000 gms

Sl. No.	Description	Notation	Test Result	
			Trail 1	Trail 2
1	Weight of Aggregate Suspended in water with the Basket (in gms)	A1	3728.0	3727.0
2	Weight of Empty Basket suspended in Water (in gms)	A2	2457.0	2458.0
3	Weight of Saturarted aggregate in water (in gms) = (A1-A2)	A	1271.0	1269.0
4	Weight of saturated surface dry aggregate in air (in gms)	B	2019.0	2018.0
5	Weight of oven dry Aggregate (in gms)	C	2009.0	2008.0

Result :	1. Specific gravity = (C/B-A)	2.69	2.68
	2. Water Absorption in Percentage = (B-C*100/C)	0.50	0.50

* Data specified by Contractor

Remarks: Maximum allowable Aggregate Water absorption value for Bituminous Concrete is 2.0%

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RNC CONSULTANT

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TEST REPORT ON STABILITY OF MIX

RNC No. : RNC-BBMP-371-2021-22
Date. : 03.06.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).

Source of Sample : Sample Supplied by Contractor.
Technical Reference : MORTH Table 500-17
Material description : Bituminous Concrete
Date of Reciept of Sample : 03.06.2022
Date of testing : 03.06.2022

TEST RESULTS

Sl.No	Description	Test Result		Requirement as per MORTH
		Trail 1	Trail 2	
1	Marshal Stability, Kn	9.58	9.59	9 Kn (min)
2	Marshal flow, mm	3.25	3.24	2 – 4
3	Percent air voids in Mix	12.23	12.24	11 – 13
4	Percent voids in mineral aggregates	4.31	4.33	3 – 5
5	Percent voids filled with Bitumen	71.34	71.36	65 - 75
6	Density, g/cc	2.26	2.28	-

* Data specified by Contractor.

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RNC CONSULTANT

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TEST REPORT ON BITUMEN CONTENT AND GRADATION FOR BITUMINOUS CONCRETE

RNC No. : RNC-BBMP-371-2021-22
Date. : 03.06.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07)
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015, AASHTO T 164 & AASHTO T 30 & MORTH
Material description : Bituminous Concrete
Date of Reciept of Sample : 03.06.2022
Date of testing : 03.06.2022

TEST RESULTS

BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	471	469
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	29.00	31.00
7. Bitumen content in %	5.80	6.20
8. Average	6.00	

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TEST REPORT ON BITUMEN

RNC No. : RNC-BBMP-371-2021-22
Date. : 02.06.2022

Client Name : **Executive Engineer**, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : **Sri. Mohan Kumar S.R**, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no -03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Referenc : IS 73 -2019
Material descriptio : VG-30 Bitumen
Date of Reciept of Sample : 02.06.2022
Date of testing : 02.06.2022

TEST RESULTS

Sl.No	Description	Test Result	Requirement as per IS:73:2019
1	Penetration at 25 ^{0}C, 1/10 mm	48	Min 45
2	Softening point, ^{0}C	50	Min. 47
3	Ductility at 27^{0}C, cm	> 100	Min. 40
4	Flash Point, ^{0}C	318	Min. 220

* Data specified by Contractor.

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RNC CONSULTANT
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TEST REPORT ON FLAKINESS & ELONGATION

RNC No. : RNC-BBMP-371-2021-22
Date. : 02.06.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07).
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS:2386(part 1)-1963 RA 2016
Material description : Bituminous Macadam
Date of Reciept of Sample : 02.06.2022
Date of testing : 02.06.2022

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-13
1	Flakiness Index	16.52%	Maximum allowable Flakiness & Elongation for Bituminous macadam is 35%
2	Elongation Index	12.41%	
	Combined Flakiness & Elongation	**28.93%**	

* Data specified by Contractor.

Notes:-
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TEST REPORT ON GRADATION

RNC No. : RNC-BBMP-371-2021-22
Date. : 03.06.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no.-03 of Yelahanka New Town Sub Division. (PACKAGE NO-07)
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015
Material description : Bituminous Macadam
Date of Reciept of Sample : 03.06.2022
Date of testing : 03.06.2022

TEST RESULTS

Total Wt. of Aggregates in gms 5125

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-7
26.5	0	0	0	100	100
19	202	202	3.94	96.06	90-100
13.2	1485	1687	32.92	67.08	56-88
4.75	1711	3398	66.30	33.70	16-36
2.36	812	4210	82.15	17.85	4-19
0.3	510	4720	92.10	7.90	2-10
0.075	152	4872	95.06	4.94	0-8

* Data specified by Contractor.

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TEST REPORT ON BITUMEN CONTENT AND GRADATION

RNC No. : RNC-BBMP-371-2021-22
Date. : 03.06.2022

Client Name : Executive Engineer, Yelahanka Division, BBMP, Bangalore.
***Contractor Name** : Sri. Mohan Kumar S.R, Contractor, Bangalore.
Project Name : Restoration and Improvements of Balance Roads of Brundhavana Layout, Balaji Layout, BHEL 1st Phase and 2nd Phase Layout, Lakshmaiahreddy Layout, Naidu Layout, Jyothinagara 2nd and 3rd Phase, Ramanna Garden and Surrounding areas in ward no -03 of Yelahanka New Town Sub Division. (PACKAGE NO-07)
Source of Sample : Sample Supplied by Contractor.
Technical Reference : IS 2720 (Part-4)- 1985 RA 2015
Material description : Bitumminous Macadam
Date of Reciept of Sample : 03.06.2022
Date of testing : 03.06.2022

TEST RESULTS

BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	482	482.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g (corrected)	18.00	17.50
7. Bitumen content in %	3.60	3.50
8. Average	3.55	

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Total Wt. of Aggregates in gms 482

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-7
26.5	0	0	0	100	100
19	32.6	32.6	6.76	93.24	90-100
13.2	158.5	191.1	39.65	60.35	56-88
4.75	141.2	332.3	68.94	31.06	16-36
2.36	68.9	401.2	83.24	16.76	4-19
0.3	40.3	441.5	91.60	8.40	2-10
0.075	13.6	455.1	94.42	5.58	0-8

Total Wt. of Aggregates in gms 482.5

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-7
26.5	0	0	0	100	100
19	31.2	31.2	6.47	93.53	90-100
13.2	161.5	192.7	39.94	60.06	56-88
4.75	152.5	345.2	71.54	28.46	16-36
2.36	65.2	410.4	85.06	14.94	4-19
0.3	51.5	461.9	95.73	4.27	2-10
0.075	5.2	467.1	96.81	3.19	0-8

* Data specified by Contractor.

Notes:-

- This Test Report refers only to the sample Submitted for testing.
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